WHAT IS CLAIMED IS:

1. A method of treating or preventing cancer in an animal, comprising administering to an animal having or at risk for developing cancer a biologically effective amount of at least a first agent that binds copper and forms an agent-copper-protein complex.

2. The method of claim 1, wherein said at least a first agent is a thiomolybdate compound.

3. The method of claim 2, wherein said at least a first agent is tetrathiomolybdate.

4. A method of treating or preventing cancer in a human subject, comprising administering to a human subject having or at risk for developing cancer a therapeutically effective amount of at least a first agent that binds copper and forms an agent-copper-protein complex.

5. The method of claim 4, wherein said human subject is at risk for developing cancer.

6. The method of claim 4, wherein said human subject has cancer.

7. The method of claim 4, wherein said at least a first agent is a thiomolybdate compound.

8. The method of claim 7, wherein said thiomolybdate compound comprises at least a first iron atom.

9. The method of claim 7, wherein said thiomolybdate compound comprises at least a first oxygen atom.

10. The method of claim 7, wherein said thiomolybdate compound is associated with at least a first carbohydrate molecule.

11. The method of claim 10, wherein said thiomolybdate compound is associated with at least a first disaccharide molecule.

12. The method of claim 11, wherein said thiomolybdate compound is associated with at least a first sucrose molecule.

13. The method of claim 12, wherein said thiomolybdate compound is associated with about 30 sucrose molecules.

14. The method of claim 7, wherein said thiomolybdate compound is dodecathiodimolybdate, tetrathiomolybdate, iron octathiodimolybdate, trithiomolybdate, dithiomolybdate or monothiomolybdate.

15. The method of claim 14, wherein said thiomolybdate compound is tetrathiomolybdate.

16. The method of claim 14, wherein said at least a first agent is dodecathiodimolybdate.

17. The method of claim 14, wherein said at least a first agent is iron octathiodimolybdate.

18. The method of claim 4, wherein said therapeutically effective amount of said at least a first agent is between about 20 mg and about 200 mg.

19. The method of claim 18, wherein said therapeutically effective amount of said at least a first agent is between about 125 mg and about 200 mg.

20. The method of claim 19, wherein said therapeutically effective amount of said at least a first agent is between about 150 mg and about 180 mg.

21. The method of claim 4, wherein said human subject has at least a first renal, lung, breast, colon, prostate or brain tumor.

22. The method of claim 4, wherein said human subject has at least a first chondrosarcoma or angiosarcoma.

23. The method of claim 4, wherein said human subject has at least a first small sized tumor.

24. The method of claim 4, wherein said human subject has at least a first medium sized tumor.

25. The method of claim 4, wherein said human subject has at least a first and at least a second distinct type of tumor.

26. The method of claim 25, wherein said human subject has a breast tumor and a chondrosarcoma.

27. The method of claim 25, wherein said human subject has a renal tumor and a lung tumor.

28. The method of claim 4, wherein said at least a first agent is orally administered to said human subject.

29. The method of claim 4, further comprising administering to said human subject a therapeutically effective amount of at least a second anti-cancer agent.

30. The method of claim 29, wherein said at least a second anti-cancer agent is a chemotherapeutic agent, a radiotherapeutic agent, a distinct agent that binds copper, an anti-angiogenic agent or an apoptosis-inducing agent.

31. The method of claim 4, further comprising subjecting said human subject to surgery or radiotherapy.

32. The method of claim 4, further comprising administering a therapeutically effective amount of a zinc compound to said human subject.

33. The method of claim 4, comprising;

a) administering said at least a first agent to said human subject in an amount and for a time effective to reduce the level of copper in said human subject to about 20% of the level of copper in said human subject prior to administration of said at least a first agent; and

b) administering to said human subject a therapeutically effective amount of a zinc compound.

34. The method of claim 33, wherein said therapeutically effective amount of a zinc compound is administered to said human subject for a period of time effective to maintain the level of copper in said human subject at about 20% of the level of copper in said human subject prior to administration of said at least a first agent.

35. A method of treating or preventing cancer in a human subject, comprising administering to a human subject having or at risk for developing cancer a therapeutically effective amount of dodecathiodimolybdate, tetrathiomolybdate, iron octathiodimolybdate, trithiomolybdate, dithiomolybdate or monothiomolybdate.

36. A method of treating or preventing cancer in a human subject, comprising administering to a human subject having or at risk for developing cancer a therapeutically effective amount of tetrathiomolybdate.

37. A method of treating cancer in a human subject, comprising:

a) administering tetrathiomolybdate to said human subject in an amount and for a time effective to reduce the level of copper in said human subject to about 20% of the level of copper in said human subject prior to administration of said tetrathiomolybdate; and

b) administering to said human subject a therapeutically effective amount of a zinc compound.

38. A method of treating or preventing wet type macular degeneration in an animal, comprising administering to an animal having or at risk for developing wet

type macular degeneration a therapeutically effective amount of at least a first agent that binds copper and forms an agent-copper-protein complex.

39. The method of claim 38, wherein said at least a first agent is a thiomolybdate compound.

40. The method of claim 39, wherein said at least a first agent is tetrathiomolybdate.

41. A method of treating or preventing rheumatoid arthritis in an animal, comprising administering to an animal having or at risk for developing rheumatoid arthritis a therapeutically effective amount of at least a first agent that binds copper and forms an agent-copper-protein complex.

42. The method of claim 41, wherein said at least a first agent is a thiomolybdate compound.

43. The method of claim 42, wherein said at least a first agent is tetrathiomolybdate.

44. A method of treating or preventing a disease characterized by aberrant vascularization in an animal, comprising administering to an animal having or at risk for developing a disease characterized by aberrant vascularization a therapeutically

effective amount of at least a first agent that binds copper and forms an agent-copper-protein complex.

45. The method of claim 44, wherein said disease is cancer.

46. The method of claim 44, wherein said disease is wet type macular degeneration.

47. The method of claim 44, wherein said disease is rheumatoid arthritis.

48. A therapeutic kit comprising, in at least a first suitable container, a therapeutically effective combined amount of:

a) at least a first agent that binds copper and forms an agent-copper-protein complex; and

b) at least a second anti-cancer agent.

49. The therapeutic kit of claim 48, wherein said at least a first agent is a thiomolybdate compound.

50. The therapeutic kit of claim 49, wherein said thiomolybdate compound is associated with at least a first carbohydrate molecule.

51. The therapeutic kit of claim 49, wherein said thiomolybdate compound is dodecathiodimolybdate, tetrathiomolybdate, iron octathiodimolybdate, trithiomolybdate, dithiomolybdate or monothiomolybdate.

52. The therapeutic kit of claim 51, wherein said thiomolybdate compound is tetrathiomolybdate.

53. The therapeutic kit of claim 48, wherein said at least a second anti-cancer agent is a chemotherapeutic agent, a radiotherapeutic agent, a distinct agent that binds copper, an anti-angiogenic agent, an apoptosis-inducing agent or a zinc compound.

54. The therapeutic kit of claim 53, wherein said at least a second anti-cancer agent is a zinc compound.

55. The therapeutic kit of claim 48, wherein said at least a first agent and said at least a second anti-cancer agent are comprised in separate containers.

56. A composition comprising a combined therapeutic amount of at least a first agent that binds copper and forms an agent-copper-protein complex and at least a second anti-cancer agent.

57. The composition of claim 56, wherein said at least a first agent is a thiomolybdate compound.

58. The composition of claim 57, wherein said thiomolybdate compound is associated with at least a first carbohydrate molecule.

59. The composition of claim 57, wherein said thiomolybdate compound is dodecathiodimolybdate, tetrathiomolybdate, iron octathiodimolybdate, trithiomolybdate, dithiomolybdate or monothiomolybdate.

60. The composition of claim 57, wherein said thiomolybdate compound is tetrathiomolybdate.

61. The composition of claim 56, wherein said at least a second anti-cancer agent is a chemotherapeutic agent, a radiotherapeutic agent, a distinct agent that binds copper, an anti-angiogenic agent, an apoptosis-inducing agent or a zinc compound.

62. A composition comprising a thiomolybdate compound associated with at least a first carbohydrate molecule.

63. The composition of claim 62, wherein said thiomolybdate compound comprises at least a first iron residue.

64. The composition of claim 62, wherein said thiomolybdate compound comprises at least a first oxygen residue.

65. The composition of claim 62, wherein the ratio of carbohydrate molecules to the thiomolybdate compound is between about 100 to 1 and about 5 to 1.

66. The composition of claim 65, wherein the ratio of carbohydrate molecules to the thiomolybdate compound is about 30 to 1.

67. The composition of claim 62, wherein the at least a first carbohydrate molecule is a monosaccharide.

68. The composition of claim 62, wherein the at least a first carbohydrate molecule is a disaccharide.

69. The composition of claim 68, wherein the at least a first carbohydrate molecule is sucrose.

70. The composition of claim 62, wherein the at least a first carbohydrate molecule is an oligosaccharide.

71. The composition of claim 62, wherein said thiomolybdate compound is associated with at least a first and at least a second distinct carbohydrate molecule.

72. The composition of claim 62, wherein said thiomolybdate compound is hydrogen bonded to at least a first carbohydrate molecule.

73. The composition of claim 62, wherein said thiomolybdate compound is covalently bonded to at least a first carbohydrate molecule.

74. The composition of claim 62, wherein said thiomolybdate compound is dodecathiodimolybdate, tetrathiomolybdate, iron octathiodimolybdate, trithiomolybdate, dithiomolybdate or monothiomolybdate.

75. The composition of claim 74, wherein said thiomolybdate compound is tetrathiomolybdate.

76. The composition of claim 62, further comprising a zinc compound.

77. The composition of claim 62, dispersed in a pharmaceutically acceptable excipient.

78. A stabilized tetrathiomolybdate composition comprising tetrathiomolybdate associated with about 30 sucrose molecules.

79. A pharmaceutical composition comprising a thiomolybdate compound associated with at least a first carbohydrate molecule.